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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/091,624	03/05/2002	Zhigang Qi	RPC-120	8207
41245	7590	03/08/2005	EXAMINER	
MARK LEVY & ASSOCIATES, PLLC PRESS BUILDING, SUITE 902 19 CHENANGO STREET BINGHAMTON, NY 13901			CREPEAU, JONATHAN	
			ART UNIT	PAPER NUMBER
			1746	

DATE MAILED: 03/08/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

10/091,624

Applicant(s)

QI ET AL.

Examiner

Jonathan S. Crepeau

Art Unit

1746

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 18 January 2005.
- 2a) ☐ This action is FINAL. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1 and 10-14 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1 and 10-14 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date _____.
- 4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____.
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: _____.

DETAILED ACTION

Continued Examination Under 37 CFR 1.114

1. A request for continued examination under 37 CFR 1.114, including the fee set forth in 37 CFR 1.17(e), was filed in this application after final rejection. Since this application is eligible for continued examination under 37 CFR 1.114, and the fee set forth in 37 CFR 1.17(e) has been timely paid, the finality of the previous Office action has been withdrawn pursuant to 37 CFR 1.114. Applicant's submission filed on December 1, 2004 has been entered.

This Office action addresses claims 1 and 10-14. Claims 1 and 10-13 remain rejected for substantially the reasons of record under 35 USC §103, and claim 14 is newly rejected under 35 USC §112, first paragraph, and 35 USC §103. This action is non-final.

Claim Suggestions

2. In claim 1, it is unclear if Applicant intends to use Markush-type language to enumerate the fuel species. Appropriate correction is suggested but not required. See MPEP §2173.05(h).

Claim Rejections - 35 USC § 112

3. Claims 14 is rejected under 35 U.S.C. 112, first paragraph, as failing to comply with the written description requirement. The claim(s) contains subject matter which was not described

in the specification in such a way as to reasonably convey to one skilled in the relevant art that the inventor(s), at the time the application was filed, had possession of the claimed invention.

Claim 14 has been amended to recite the limitation “reversing said first and said second potentials.” However, it is submitted that this is different than “switching the polarity of the anode and cathode” disclosed at page 13, line 20 of the specification, cited by Applicants as supporting the amendment. The former implies that the magnitude of the voltage stays the same, with only the sign changing; the latter implies that the magnitudes do not have to be the same. As such, the amendment to claim 14 is considered to constitute new matter.

Claim Rejections - 35 USC § 102

4. Claims 1 and 10-13 are rejected under 35 U.S.C. 102(e) as being anticipated by Peled et al (U.S. Patent 6,492,047). The reference teaches a direct oxidation fuel cell in column 3, line 40. Regarding claims 4, 5, and 8, the fuels may comprise glycerol, isopropyl alcohol (2-propanol), and ethylene glycol, among others. Regarding claims 10-13, the fuel cell comprises a NAFION® proton exchange membrane (see Example 6).

Thus, the instant claims are anticipated.

Claim Rejections - 35 USC § 103

5. Claim 14 is rejected under 35 U.S.C. 103(a) as being unpatentable over Peled et al in view of Fedkiw et al (*J. Electrochem. Soc.*, 1988).

Peled et al. is applied to claims 1 and 10-13 for the reasons stated above. However, Peled et al. does not expressly teach that the fuel cell comprises means for eliminating anode poisons by periodically reversing the polarity of the anode and cathode.

Fedkiw et al. is directed to a fuel cell system comprising a signal generator for periodically applying a positive voltage to eliminate anode poisons. The applied voltage may be of such magnitude to cause a fuel cell short circuit (i.e., polarity reversal; see first page, first column, last paragraph of the reference).

Therefore, the invention as a whole would have been obvious to one of ordinary skill in the art at the time the invention was made because the artisan would be motivated to use the signal generator of Fedkiw in the fuel cell of Peled et al. As disclosed in the abstract of Fedkiw, power output from a fuel cell can be increased under pulsed-potential operation. Accordingly, the artisan would be motivated to use the signal generator of Fedkiw in the fuel cell of Peled et al.

Double Patenting

6. Claims 1 and 10-13 are provisionally rejected under the judicially created doctrine of obviousness-type double patenting as being unpatentable over claims 1-12 of copending

Application No. 10/187,082 (U.S. Pre-Grant Publication No. 2004/0001979). Although the conflicting claims are not identical, they are not patentably distinct from each other because the claims of the '082 application anticipate the instant claims. See *In re Goodman*, 11 F.3d 1046, 29 USPQ2d 2010 (Fed. Cir. 1993).

This is a provisional obviousness-type double patenting rejection because the conflicting claims have not in fact been patented.

Response to Arguments

7. Applicant's arguments filed December 1, 2004 have been fully considered but they are not persuasive insofar as they apply to the present rejections. Regarding Applicant's argument that Peled is non-enabling with respect to 2-propanol, this argument is not persuasive. Applicant must show that an artisan could not have made or used the prior art apparatus. This has not been shown in this case. See MPEP §2121. Merely because Peled et al. do not have a working example using 2-propanol does not, in and of itself, negate the enablement of using such a fuel to a skilled artisan. Further, Applicant argues that another prior art reference teaches away from using 2-propanol. However, such teaching away is inapplicable to an anticipation analysis, as the claimed subject matter is anticipated by Peled. See MPEP §2131.05.

Conclusion

8. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Jonathan Crepeau whose telephone number is (571) 272-1299.

The examiner can normally be reached Monday-Friday from 9:30 AM - 6:00 PM EST.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Michael Barr, can be reached at (571) 272-1414. The phone number for the organization where this application or proceeding is assigned is (571) 272-1700. Documents may be faxed to the central fax server at (703) 872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).



Jonathan Crepeau
Primary Examiner
Art Unit 1746
March 6, 2005